

REMARKS:

By the Amendment herewith, Applicant's independent claims (1, 22 and 23) are amended to specify that the scatternet has a first network topology including a first route, wherein the first route extends between the first device and the destination device and includes at least one further device and that the addition of the short-circuit converts the scatternet to a second, different topology including the first route between the first device and the destination device and also a second route formed by the short-circuit, wherein the second route is different from the first route and extends directly between the first device and the destination device without including another device. Support for the foregoing can be found, for example, in Fig. 1, Fig. 2 and p. 6, line 16 to p. 7, line 22 of the specification.

The foregoing amendments emphasize that the new link may be a direct short circuit added to a network topology within which there already exists a route from the first node to the destination node, and that the existing route may include at least one intervening device between the first node and the destination node. The first device may determine whether it can create a direct connection to the destination node, short circuiting the network, even though there already exists a longer path to the destination node.

The independent claims also are amended to include the feature that the short-circuit is temporary and the scatternet/piconets are not permanently changed. Support for this amendment can be found on, for example, at p. 7, line 24 and in the original claims.

Claims 17, 45 and 48 are canceled without prejudice.

Dependent claims 3, 5, 37-40, 44, 46, 47, 49 and 50 are amended for consistency in terminology and/or to modify claim dependency, and new claims 51-54 are added by amendment herewith, as further described below.

No new matter is introduced into the application as a result of the foregoing changes.

Accordingly, upon entry of this Amendment, claims 1, 3, 5, 10, 12-13, 15, 18, 21-24, 37-44, 46-47 and 49-54 are pending. Of those claims, claims 1, 22, 23 and 53 are independent.

In the outstanding Office Action, claims 5, 37, 38, 40, 44, 47 and 48 are rejected under 35 USC Section 112, first paragraph, as failing to comply with the written description requirement.

The foregoing rejection is respectfully disagreed with, and is traversed below.

In the interest of advancing the prosecution of the subject application, claims 37 and 44 are clarified to specify the "first device" rather than the "destination device." Regarding the Examiner's objection to the wording of claims 38 and 47, it is respectfully noted that these claim limitations are described in the original specification regarding the temporary nature of the short-circuit. See, for example, page 7, lines 24-25 and Figs. 1-2. Regarding the Examiner's objection to the wording of claims 5 and 40, it is further pointed out that these claim limitations also are described in the original application. See, for example, Figs 1-2. Lastly, claim 48 is canceled without prejudice.

In view of the foregoing, reconsideration and withdrawal of the rejection under 35 USC Section 112, first paragraph, is respectfully requested.

Claims 5, 40 and 48 are then rejected under 35 USC Section 112, second paragraph, as being indefinite.

The above rejection is respectfully disagreed with, and is traversed below.

Claim 48 is canceled, as noted above. Regarding claims 5 and 40, it is respectfully asserted that these claims are clear to the skilled artisan. The Examiner's attention is particularly directed to the terms "except for" and "otherwise" in claim 5 and the terms "substantially" and "otherwise" in claim 40. The Examiner is thus requested to reconsider and withdraw this indefiniteness rejection.

Regarding the rejections based upon art, claims 1, 3, 5, 10, 12, 13, 15, 22-24, 37, 39 and 40-44 are rejected under 35 USC Section 102(e) as being anticipated by Larsson et al. (US 6,751,200, hereinafter "Larsson"). Claims 17, 18, 38 and 45-50 are rejected under 35 USC Section 103(a) as being unpatentable over Larsson in view of Isumi (US Patent 5,815,816, hereinafter "Isumi"). Lastly, dependent claim 21 is rejected under 35 USC Section 103(a) as being unpatentable over Larsson in view of Langberg et al. (US 5,852,630, hereinafter "Langberg").

The foregoing rejections are respectfully disagreed with, and are traversed below.

Larsson clearly teaches that the new route discovery process, and thus the creation of new links, will not be carried out if an adequate route to the destination node already exists (see e.g. col. 6 lines 4-8 & Fig. 6 of Larsson). Whether or not a route exists from the source node to the destination node is determined by the source node broadcasting a route request message to nodes connected through existing piconets (col. 5 lines 59 – 62).

Larsson discloses the scenario that the new route discovery will be implemented even though a route from the source node to the destination node already exists because it is necessary to optimize the route or because the reply to the route request was received by the source node after the new route discovery process had been initiated. In both of these scenarios Larsson teaches that the existing route is used until the more efficient route is established (see Fig. 6 step 630, Fig. 7 step 715, col. 6 lines 12 – 14 & col. 6 lines 57 – 59 of Larsson). Furthermore, in both of these cases the routing request has already flooded the existing scatternet.

In contrast, in Applicant's independent claim 1 of the subject application the packet is only forwarded within the first network topology of the scatternet if it is not possible to create a direct short-circuit.

See also Applicant's independent claims 22 and 23 specifying, in part, respectively: "...configured, in response to a determination that it is not possible to add the short-circuit, to

enable forwarding of the packet within the first network topology of the scatternet ...” (claim 22); and “...if it is not possible, forwarding the packet within the network ...”.

Moreover, at col. 6, lines 8-10, Larsson discloses “[T]he source node may, in contrast, determine that it is necessary to optimize the route, that is, define a new, more efficient route,...” and at col. 7, lines 26 – 34, Larsson further discloses “[T]he actual piconet establishment procedure means that the nodes (source node and nodes forwarding the request) must enter an *INQUIRY* mode to scan the environment... The node will get a number of responses from nodes in the neighborhood. The node can thereafter make some sort of smart decision as to which nodes it should connect to, and how the new piconets should be formed.” (Emphasis added).

Larsson thus teaches that when the route to the destination node is sub-optimal the network is redefined to create a new, more efficient route. In this system, it is respectfully asserted that it would not make sense for the resulting network to contain a direct route between the source node and the destination node and a second longer route between the two nodes.

As noted above, Applicant’s independent claims also are amended to include the feature that the short-circuit is temporary and the scatternet/piconets are not permanently changed.

The Examiner appears to acknowledge that Larsson does not disclose that the short circuit link may be temporary, but alleges that this feature is obvious in light of Isumi. Applicant respectfully disagrees.

Larsson discloses at col. 7, lines 26-34 (see above) that the whole piconet topology should be redefined, which Larsson acknowledges is an overhead intensive operation. There would be no reason to carry out this operation temporarily.

Accordingly, it is respectfully asserted that Larsson, whether viewed alone or in combination with Isumi, does not disclose or suggest Applicant’s independent claims 1, 22 or 23. Nor is there a reason to combine and modify these teachings in an attempt to arrive at these claims, for the

reasons noted above. Thus, the Examiner is respectfully requested to reconsider and withdrawn the rejections based upon Larsson, alone and in combination with Isumi.

As noted above, new independent claim 53 and new dependent claims 51-52 and 54 are added by this Amendment. These claims relate to the feature that the device(s) maintain a list of other devices within radio communications range and that determining whether it is possible to modify the first network topology by adding a short-circuit comprises determining whether the destination device is included in the list. Support for these changes can be found in Applicant's prior claims and in the specification at, for example, p. 9 lines, 14-20 and p. 9, line 30 to p. 10, line 2.

In the outstanding Office Action, the Examiner appears to contend that such features are disclosed in Larsson at col. 2, lines 65-68. This passage describes that a Bluetooth device may create a list of devices by transmitting INQUIRY messages and listening for INQUIRY RESPONSE messages. List creation is done by "a Bluetooth unit wanting to discover neighboring Bluetooth units" (col. 2, line 48 of Larsson). Larsson teaches new list creation whenever new piconets are considered necessary. The devices do not therefore maintain a list of devices within range.

Accordingly, it is respectfully asserted that Larsson, whether viewed alone or in combination with Isumi, does not disclose or suggest Applicant's new independent claim 53. Nor is there a reason to modify the teachings of these references in an attempt to arrive at this claimed subject matter.

In view of the foregoing, it is respectfully asserted that independent claims 1, 22, 23 and 53 are patentable over the cited art. Accordingly, the remaining dependent claims also are believed to be patentable at least in view of their dependency from an allowable independent claim. For completion, it also is noted that the addition of the Langberg reference, which was cited as disclosing a computer program in the rejection of dependent claim 21, does not render the claimed invention obvious for the reasons set forth above.

S.N.: 10/749,945
Art Unit: 2619

All issues having been addressed, it is respectfully submitted that all of the claims now present in the application are novel and patentable over the cited art. Accordingly, reconsideration and withdrawal of the outstanding rejections is respectfully requested. A Notice of Allowance is therefore earnestly solicited.

Respectfully submitted:

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